

IN THE ABSTRACT

Please delete the current Abstract in its entirety and  
substitute therefor the following New Abstract:

NEW ABSTRACT

An image processing system, for correlating shapes in multi-dimensional images including image data processor for estimating a similarity measure including estimating two image signals representing shapes defined in respective windows in two multi-dimensional images using a Hermite Transform applied to both the image signals for performing an evaluation of two first sets of scalar valued Hermite coefficients from which a combination yields a transformed set of scalar valued Hermite coefficients  $\{\mathbf{K}_t\}$ . The inverse Hermite Transform is applied to the transformed set of scalar valued Hermite coefficients to achieve the computation of a windowed correlation function. The maximum of the windowed correlation function is estimated as the wanted similarity measure to correlate the shapes. The correlated shapes and/or processed images are displayed.